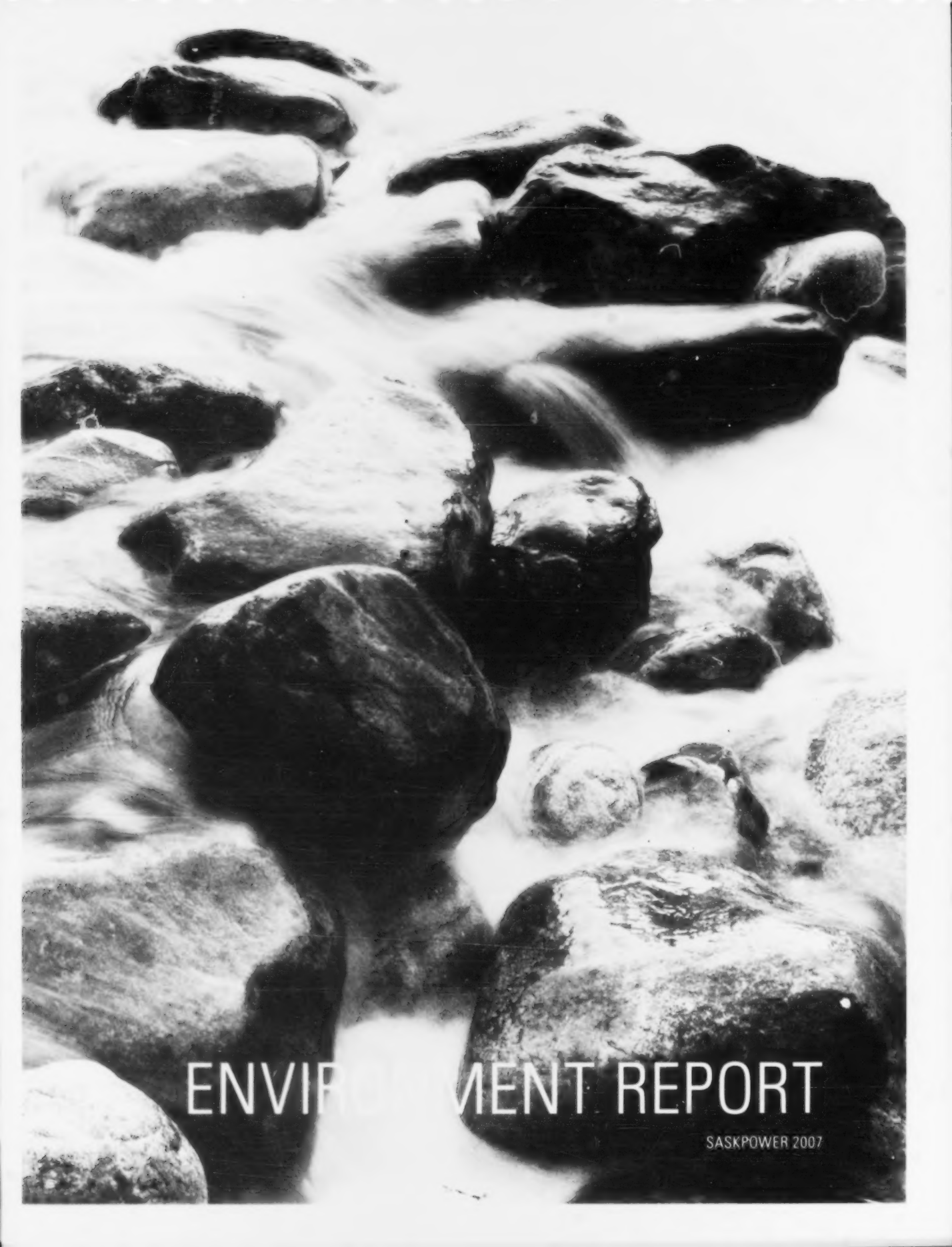




ENVIRONMENT REPORT

SASKPOWER 2007



**FOR SASKPOWER,
WATER REPRESENTS
A POWERFUL NATURAL
FORCE THAT PLAYS
AN INTEGRAL ROLE
IN MEETING OUR
PROVINCE'S ENERGY
NEEDS. FOR MANY,
MOVING WATER CAN
ALSO SYMBOLIZE
A JOURNEY.**

IN 2007, OUR COMPANY CONTINUED TO TRAVEL TOWARD STRENGTHENING OUR COLLABORATION ON ENVIRONMENTALLY FOCUSSED POLICY DEVELOPMENT. WE DEVELOPED A NATIONAL-FIRST PROTOCOL AGREEMENT AND ACTION PLAN WITH FISHERIES AND OCEANS CANADA, SASKATCHEWAN MINISTRY OF ENVIRONMENT AND SASKATCHEWAN WATERSHED AUTHORITY.

THE ACCORD IS PROVIDING OUR COMPANY WITH A FRAMEWORK FOR MANAGING FISH AND FISH HABITAT AT ALL OF OUR GENERATING FACILITIES. ALONG WITH OUR OTHER ENVIRONMENTAL INITIATIVES, IT'S ALSO TAKING US A LITTLE CLOSER TO OUR ULTIMATE DESTINATION — A SUSTAINABLE FUTURE.

HIGHLIGHTS

- Major supply decision — emphasizing greenhouse gas emissions reductions — outlines our company's plans to meet Saskatchewan's growing electricity needs from 2010-2014.
- SaskPower becomes the first utility in the world to successfully complete a workable design for a large scale near-zero emissions pulverized coal plant.
- Plans are unveiled for the addition of up to 400 megawatts (MW) of simple cycle natural gas turbines, which emit 50% less carbon dioxide (CO₂) than coal generators.
- SaskPower Eneraction portfolio of efficiency, conservation and load management programs is introduced.
- Over 16,000 compact fluorescent light bulbs are distributed for free in six communities.
- New Net Metering Program encourages development of green power by customers.
- Centennial Wind Power Facility completes first full calendar year of operation with a capacity factor rating in the top 10% of wind power facilities in the world.
- First of four new waste heat recovery units completes initial year of operation as part of SaskPower's Environmentally Preferred Power Program.
- SaskPower develops pioneering fish and fish habitat protocol agreement with Fisheries and Oceans Canada, Saskatchewan Ministry of Environment and Saskatchewan Watershed Authority.
- Online Environmental Screening System training continues across SaskPower.
- Emissions Control Research Facility furthers mercury, sulphur dioxide, nitrogen oxides and particulate control research.
- Major unit overhaul at Poplar River Power Station leads to greater generation efficiency.
- Energy Performance Contracting agreement signed with the Sunrise Health Region, with resulting energy efficiency upgrades projected to generate \$473,000 in annual savings.
- Customers reduce greenhouse gas emissions by over 50,000 tonnes during the year by purchasing EcoLogo-certified GreenPower.
- Province-wide Power Savings campaigns educate customers on energy efficiency.
- SaskPower Shand Greenhouse reaches distribution mark of over 5.7 million seedlings since opening.
- Environmental Management System re-registered under the ISO 14001 Standard following annual independent audits.

5,700,000

NUMBER OF SEEDLINGS DISTRIBUTED BY SASKPOWER
SHAND GREENHOUSE SINCE OPENING.

OUR STRATEGIC DIRECTION

OUR VISION

PEOPLE AND INNOVATION. POWERING
SASKATCHEWAN TO A BRIGHT FUTURE.

OUR MISSION

SAFE, RELIABLE AND SUSTAINABLE
POWER TO OUR CUSTOMERS.

OUR VALUES

RESPECT, INTEGRITY AND
OPENNESS IN ALL WE DO.

CORPORATE PROFILE

As the principal supplier of electricity in Saskatchewan, SaskPower serves more than 451,000 customers and manages \$4.5 billion in assets. We have almost 2,500 permanent full-time employees located in 71 communities.

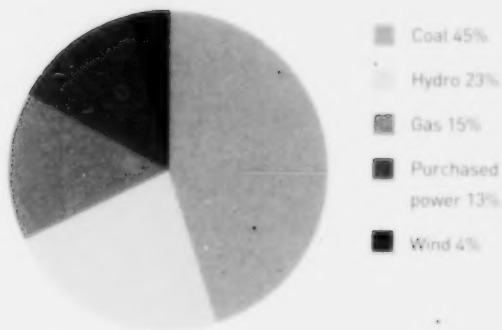
Our company operates three coal-fired power stations, seven hydroelectric stations, four natural gas stations and two wind facilities with an aggregate generating capacity of 3,214 megawatts (MW).

SaskPower also has purchase agreements with the Meridian Cogeneration Station, Cory Cogeneration Station, SunBridge Wind Power Project and NRGreen Kerrobert Heat Recovery Project, which increases our total available capacity to 3,668 MW.

SaskPower maintains more than 155,000 kilometres of power lines, 52 high voltage switching stations and 175 distribution substations.

We also operate three wholly owned subsidiaries — SaskPower International, NorthPoint Energy Solutions and SaskPower Shand Greenhouse.

2009 GENERATION CAPACITY (NET MW)



155,818

KILOMETRES OF POWER LINES MAINTAINED BY SASKPOWER.

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OUR ENVIRONMENTAL POLICY

SaskPower demonstrates environmental leadership through prudent use of natural resources, now and into the future. We have adopted the following principles to help safeguard our air, land and water resources:

- 1 Compliance with relevant environmental legislation, regulations and corporate environmental commitments.
- 2 Prevention of pollution.
- 3 Continual improvement of our environmental management systems and environmental performance.

In support of these principles, SaskPower employees and those working on our behalf will:

- Manage all significant environmental aspects associated with our operations and services.
- Establish and maintain environmental objectives and targets.
- Integrate environmental considerations into corporate decision-making processes.
- Audit our environmental performance regularly, including audits for conformance with the ISO 14001 Standard for Environmental Management Systems.
- Ensure employees and contractors know and fulfill their environmental roles and responsibilities.
- Avoid, reduce or control emissions or discharges which may adversely affect the environment.
- Conserve resources through efficient use and implement the fundamentals of waste management: rethink, reduce, reuse, recycle and recover.
- Communicate actively, transparently and effectively with shareholders, employees, contractors, suppliers, customers, regulators and the public on environmental issues.



2000

YEAR SASKPOWER FIRST ACHIEVED CORPORATE-WIDE
ISO 14001 REGISTRATION FOR ITS ENVIRONMENTAL
MANAGEMENT SYSTEM.

MAKING DECISIONS MATTER

As Saskatchewan's sole supplier of electricity, SaskPower has long been entrusted to make responsible choices as our company strives to supply affordable, safe, reliable and sustainable power to our customers. However, at no time in SaskPower's history has it been more crucial to balance the requirements of our business environment with those of our natural environment. This is especially true as we work to accommodate growing demand for electricity in the province, simultaneously facing the pending retirement of many of our generating units and the need to rebuild much of our transmission and distribution system.

For 2007, a major electricity supply decision represents an important milestone as we continue on a decades-long journey of revitalizing SaskPower's infrastructure. At the forefront of the challenges we face is the need to address global climate change and the imminent reality of a low-carbon future.

TARGETING REDUCTIONS

In recent years, SaskPower has made significant progress in lowering emissions such as sulphur dioxide and nitrogen oxides. However, today our greatest area of focus is carbon dioxide (CO₂). SaskPower is committed to working with the Government of Saskatchewan to meet the province's goal of reducing greenhouse gas emissions by 32% by 2020. This will be challenging for a company that has traditionally relied so heavily on Saskatchewan's abundant and low-cost supply of coal for base load generation. We remain steadfast in our belief that success is possible through an ongoing planning process that is fuelled by innovation, diligence and transparency.

During work for SaskPower's most recent supply decision, clean coal technology was very much the centre of attention. However, it was determined a proposed Oxyfuel technology-based unit at Shand Power Station was not feasible. The estimated cost of \$3.8 billion was prohibitive and the installation could not be completed in time to meet our province's supply needs by 2010.

On the outside looking in, some could see the decision to postpone a clean coal project as an admission of defeat. Instead, we choose to see it as progress in many forms. Even though clean coal was not selected as an option, SaskPower became the first utility in the world to complete a workable design for a large scale near-zero emissions pulverized coal plant.

Aside from establishing important technological advances, the project continues to demonstrate the leadership, ingenuity, and collaboration that will take us closer to our goal — integrating technologies that will support environmental, economic and social sustainability for our company and the customers we serve. The lessons we have learned on the Shand proposal will prove invaluable as we advance intensive research and development on clean coal at Boundary Dam Power Station, as well as a range of other future supply options.

BALANCING REQUIREMENTS

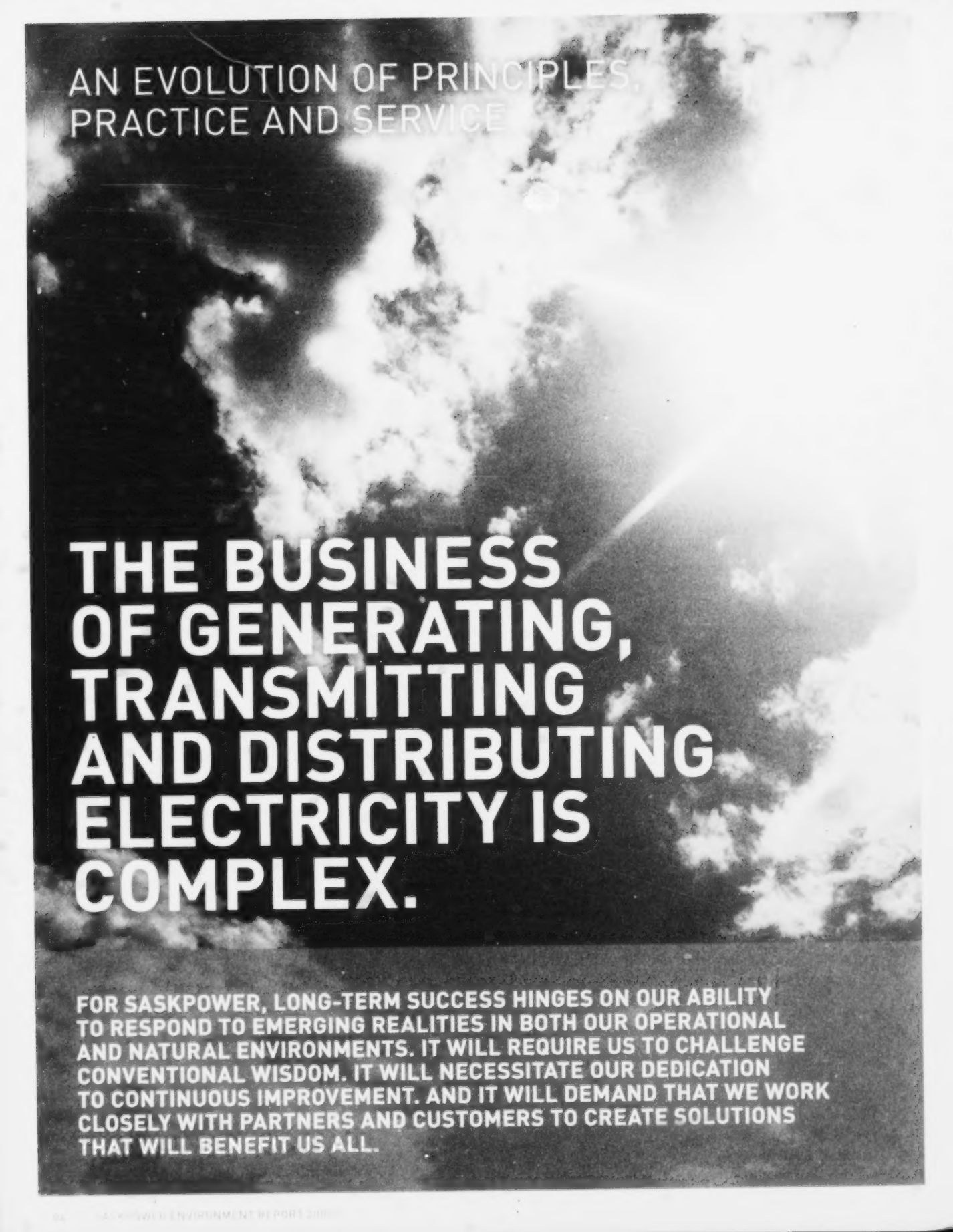
In the immediate future, our most recent supply decision allows us to meet our province's growing electricity needs while also managing environmental and economic considerations. Leading the way is a commitment to install up to 400 megawatts (MW) of simple cycle natural gas turbines over the next five years. These turbines offer a highly flexible, immediate option for meeting demand with a fuel that produces 50% less CO₂ than coal.

Along with additions to our generation fleet, our program of customer-based initiatives is growing. SaskPower Eneraction — a portfolio of efficiency, conservation and load management programs — is a major component of the supply decision. A Net Metering Program was also announced, which will allow our company the opportunity to partner with customers who generate electricity using wind, solar, low-impact hydro, biomass, flare gas and heat recovery.

Aside from the high profile task of determining Saskatchewan's future electricity supply, we are making environmental progress throughout our company. However, we have a long way to go. We must not only make significant and lasting improvements in the way we generate, transmit and distribute electricity but also in the way we work with customers to optimize power use.

Pat Gaudin

Don & 2nd



AN EVOLUTION OF PRINCIPLES,
PRACTICE AND SERVICE

THE BUSINESS OF GENERATING, TRANSMITTING AND DISTRIBUTING ELECTRICITY IS COMPLEX.

FOR SASKPOWER, LONG-TERM SUCCESS HINGES ON OUR ABILITY TO RESPOND TO EMERGING REALITIES IN BOTH OUR OPERATIONAL AND NATURAL ENVIRONMENTS. IT WILL REQUIRE US TO CHALLENGE CONVENTIONAL WISDOM. IT WILL NECESSITATE OUR DEDICATION TO CONTINUOUS IMPROVEMENT. AND IT WILL DEMAND THAT WE WORK CLOSELY WITH PARTNERS AND CUSTOMERS TO CREATE SOLUTIONS THAT WILL BENEFIT US ALL.

OUR FRAMEWORK

HOW WE APPROACH ENVIRONMENTAL RESPONSIBILITY

SaskPower's ISO 14001 Environmental Management System (EMS) provides our company, employees and contractors the necessary structure to improve environmental performance. The set of demanding measures that certifies our EMS is established by the International Organization for Standardization (ISO) — a non-governmental, worldwide federation of national standards bodies from 140 countries that works in partnership with international organizations, governments, industry, as well as business and consumer representatives.

Since implementation in 2000, SaskPower has maintained eight ISO 14001 registrations through annual independent EMS audits conducted at facilities across the province. Annual internal EMS audits are also conducted by qualified SaskPower personnel.

Our EMS provides us with an effective tool for identifying, monitoring and managing the impact of our business on air, land and water. We track our progress toward improved environmental performance by setting specific objectives and targets that are based on regulatory, technological and financial considerations as well as the views of customers, communities and environmental agencies. SaskPower has a comprehensive environmental awareness training program to help ensure that all employees and contractors understand their roles and responsibilities and our EMS. All new employees complete this training, which they must renew every three years.

EXTERNAL POLICY

SaskPower's Environmental Policy outlines our company's commitment to comply with applicable laws while pursuing continuous improvement. It also serves as the basis upon which SaskPower sets objectives and targets. As required by our EMS,

it is reviewed each year. The core principles within the Environmental Policy are:

- Compliance with relevant environmental legislation, regulations and corporate environmental commitments.
- Prevention of pollution.
- Continual improvement of environmental management systems and environmental performance.

The complete policy can be reviewed on page one.

THE SIGNIFICANCE OF DIALOGUE

A desire to engage our customers and communities is reflected in our company's corporate values: "Respect, integrity and openness in all we do." We consult with a wide variety of stakeholders on a diverse range of environmental issues. When we are beginning work to construct a new facility or improve an existing one, public involvement is central to our efforts.

Our process typically includes early contact with local officials, distribution of detailed project information, open house sessions, meetings with individuals and interest groups, media releases, advertisements, and direct correspondence and discussion. Results of public participation programs are frequently included in project application and approval processes that are filed with regulators. SaskPower also tracks external inquiries in our EMS.

Outside of our formal public consultation process, SaskPower maintains ongoing dialogue with a wide variety of key stakeholders, including Saskatchewan Ministry of Environment, Saskatchewan Ministry of Energy and Resources, Fisheries and Oceans Canada (DFO), and the Canadian Electricity Association (CEA). In addition, we communicate with stakeholders in centres where we conduct operations.



37

RENEWABLE GENERATION CAPACITY EXPECTED
IN SASKPOWER'S SYSTEM BY 2020, IN PER CENT.

OUR YEAR

SUPPLYING SOLUTIONS WHILE MEETING DEMAND

As SaskPower's infrastructure ages and demand grows, the refurbishment or replacement of a large portion of our generation and transmission facilities is required. In 2007, our company announced the first of multiple supply decisions that will be made during the next two decades. This revitalization represents a significant opportunity to further integrate environmentally beneficial technologies into our operations while increasing the presence of renewable energy sources.

Because of the certainty of a comprehensive program of retirement and renewal in the years to come, an evaluation of numerous options is always underway at SaskPower. This includes a review of: clean coal, polygeneration, natural gas, demand side management, cogeneration, imports, purchased power, nuclear, hydro, wind and other renewables. Included in this process during the year was a Life Cycle Assessment (LCA) study, which established a provincial baseline and evaluates every activity involved in producing, maintaining, consuming and disposing of a product and how it affects the environment. Our company will be internally vetting the results from the study to assess the future role of LCA at SaskPower.

ADDRESSING IMMEDIATE NEEDS

At the most recent supply decision, our company announced a number of initiatives to meet demand through 2014. Energy efficiency, net metering, wind, waste heat recovery, and biomass may all play important roles. However, the core of the response is the installation of up to 400 megawatts (MW) of capacity from natural gas-fired turbine generators.

Natural gas-fired turbines are relatively quick and easy to install, offer operational flexibility, require no long-term fuel obligation and will allow SaskPower the time to further develop renewable and emissions management technologies. They produce up to 50% less carbon dioxide (CO₂) per megawatt hour (MWh) than conventional coal-fired generation, while emissions of sulphur dioxide (SO₂), particulates and mercury are near-zero. With modern control strategies, nitrogen oxides (NO_x) emissions will also be reduced.

The first two turbines will be located at the Ermine Switching Station, approximately 8.5 km southeast of Kerrobert. This area of Saskatchewan is experiencing an increasing demand for electricity primarily due to growth in the oilfield sector. The proximity to an existing switching station will reduce the need for new power lines.

THE FUTURE OF COAL

Recently, SaskPower has intensified its search for clean coal technologies. Saskatchewan has an abundance of this secure and low-cost fuel; however, its viability now depends on the development of effective emissions control technologies, especially in the area of CO₂.

SaskPower has not added coal-fired generation to its system since 1992. During work for the most recent supply decision, a proposal was developed for a 300-MW Oxyfuel technology-based Shand 2 Clean Coal Project. However, the estimated cost of \$3.8 billion was prohibitive and the installation could not be completed in time to meet SaskPower's supply needs by 2010.

Even though clean coal was not selected as an option at this time, SaskPower became the first utility in the world to complete a workable design for a large scale near-zero emissions pulverized coal plant. Using information developed for the Shand proposal, SaskPower has established that the refitting of an aging unit at Boundary Dam Power Station, using post-combustion capture technology, has a strong prospect of commercial success. A project proposal is being developed for consideration.

A PROMINENT PLACE FOR ENERGY EFFICIENCY

During the announcement of the supply decision, our company also unveiled the SaskPower Eneraction portfolio of energy efficiency, conservation and load management programs. This demand side management program is designed to reduce electricity demand by 300 MW by 2017, assisting customers in all segments to save power, save money and help the environment.

As part of SaskPower Eneraction, our Energy Performance Contracting (EPC) Program is a management service designed to help our larger customers reduce energy-related costs through the implementation of energy efficient upgrades. New energy efficient equipment and technical conservation efforts are implemented in existing facilities, with the savings from lower electricity, water and natural gas bills used to offset the retrofit costs. During the year, the EPC Program worked with Saskatchewan Ministry of Health to focus on expanding into the health sector. A \$6-million contract was signed with the Sunrise Health Region that will generate \$473,000 in annual energy savings. Overall, our EPC customers have reduced greenhouse gas (GHG) emissions by 30,000 tonnes of CO₂ through electricity efficiencies.

In 2007, SaskPower continued educating customers on ways to save power and reduce their impact on the environment through our Power Savings educational advertising campaigns. Our company's *A Brilliant Way to Save* campaign was launched in February. Its purpose was to educate customers on the benefits of switching to compact fluorescent light (CFL) bulbs. The campaign's main message was that CFLs use 66% less electricity than standard bulbs and last up to eight times longer. Use of CFLs by Saskatchewan residents increased 7% throughout the campaign period. In September, 16,000 CFLs were given away in six communities across the province. SaskPower also launched its *Rudolph's Gone Green* campaign in November, encouraging customers to switch to energy-efficient LED light strings during the holidays. The main message of the campaign conveyed that LED light strings use up to 95% less electricity and last up to 10 times longer than traditional holiday lights.

Meanwhile, other initiatives targeted a variety of customers. SaskPower arranged energy audits with several of its industrial users, while also participating with SaskEnergy to sponsor the Residential Low Interest Loan Program for high efficiency furnace installations. A residential cost calculator is available online at saskpower.com as part of our company's interactive Power Saving Tips and Tools. This service allows residential customers to understand where their energy dollars are going and to receive information on how to conserve energy, reduce GHG emissions and save money on their energy bills. In 2008, SaskPower will hold additional lighting events, along with expanded programming for all customer segments, featuring a variety of information on technology.

GENERATING CUSTOMER INVOLVEMENT

As interest in environmentally responsible generation grows and technology to produce electricity on a small scale improves, more and more customers are investigating ways to generate their own electricity. In 2007 — also as part of the supply decision — SaskPower

introduced a Net Metering Program in order to accommodate customers who wish to generate up to 100 kilowatts (kW) of their own environmentally friendly electricity for the purpose of offsetting power that would otherwise be purchased from our company.

In order to accommodate net metering, a bi-directional or net meter is installed by SaskPower. It allows customers to record both the electricity they use and the electricity they generate. If customers generate more power than they actually use, that excess electricity is fed back to SaskPower's electricity system. The credit for the excess electricity is then banked for a defined period of time and used to offset the customers' future electricity use.

In addition to net metering, SaskPower continues to offer the Small Power Producers Policy. This initiative applies to wind- and solar-powered facilities, as well as other viable generating sources that are a maximum of 100 kW in size. Under the Small Power Producers Policy, SaskPower will purchase excess energy at the marginal price for that electricity.

As well, the Alternative Farm Energy Solar- or Wind-Powered Livestock Water Pumping Incentive Program offers a grant equal to 50% of the cost above \$500, to a maximum of \$500, toward the purchase and installation of a solar- or wind-powered water pumping system for farm livestock. This program assists producers who would otherwise have to run power lines to remote wells, dug-outs or streams. In 2007, 245 solar projects were approved with grants totalling \$120,955.28; six wind projects were approved with grants totalling \$2,535.09.



30,000

TONNES OF CO₂ EPC CUSTOMERS HAVE REDUCED THROUGH
ELECTRICITY EFFICIENCIES SINCE PROGRAM INCEPTION.

OPERATIONAL ACTIVITIES

ENHANCING IN-HOUSE AWARENESS AND INITIATIVES

Elevating our employees' understanding of environmental issues is a priority. A pilot workshop on provincial and federal environmental legislation was held during the year, focussing on highlighting relevant areas of responsibility. Over 50 employees from locations across the province were in attendance.

In 2007, training on the use of SaskPower's Environmental Screening System (ESS) continued. Using Geographical Information System (GIS) technology, the ESS was built in-house to assist in the evaluation of potential environmental impacts and legal requirements of new projects. By using the ESS, screeners are directed to specialized environmental or archaeological staff from SaskPower's Environmental Programs department when further studies are required.

The training program — primarily oriented to regional Transmission and Distribution staff across the province — includes the completion of online modules, a one-day hands-on training session and a skill test. Presently, the ESS is being used by over 200 employees in our company. Looking to 2008, the ESS will be made more efficient as a preliminary environmental screening tool through the inclusion of new environmental data, as well as the refinement of existing data.

REGULATORY DEVELOPMENT AND COMPLIANCE

SaskPower continues to work as part of a committee — including Fisheries and Oceans Canada (DFO), Saskatchewan Ministry of Environment and the Saskatchewan Watershed Authority (SWA) — to identify and resolve potential fish and fish habitat issues at our facilities. In 2007, a Protocol Agreement and Action Plan were approved and signed by SaskPower and DFO, SWA, and Saskatchewan Ministry of Environment officials. The agreement — the first of its kind in Canada — was developed to provide a framework for addressing SaskPower's impacts to fish and fish habitat at all of our generating stations.

SaskPower continues to work cooperatively with DFO and other agencies to investigate the fish and fish habitat issues that may be of concern as a result of operations at E.B. Campbell Hydroelectric Station. A two-year aquatic assessment research project downstream of the facility was completed in 2007. This project used hydraulic modeling and fish habitat mapping of a 40-km reach of river downstream of the generating station to outline how fish habitat changes with variations in flow from the station. The draft final report is being reviewed by all agencies prior to an external review by experts in hydraulic modeling and habitat assessment.

Meanwhile, SaskPower is continuing its engagement with the Canadian Electricity Association (CEA) as it moves forward in developing a national compliance framework with DFO under a Memorandum of Understanding. In 2007, SaskPower acted as lead for the CEA on incidental take regulation development discussions with Environment Canada around the *Migratory Birds Convention Act*. In addition, as a member of the CEA, SaskPower is active in providing input into national policy development related to the implementation of the *Species at Risk Act* (SARA). Several meetings were held with regulators during the year to discuss concerns around SARA implementation, and dialogue is ongoing.

Our company is continuing its work on piping plovers, which is the SARA-listed species of most immediate concern to SaskPower. During the year, our company partnered with Nature Saskatchewan on the Piping Plover Guardian Program. In addition, for the second year in a row, SaskPower conducted a piping plover survey at Cookson Reservoir, which supplies water to Poplar River Power Station. Several plovers were found once again at this location, resulting in identification of a quarter section at Cookson as critical habitat to the recovery of the species. SaskPower also provided funding for Nature Saskatchewan's Stewards of Saskatchewan Program, which focusses on the conservation, enhancement, monitoring and awareness activities associated with the endangered burrowing owl and threatened loggerhead shrike.

EMISSIONS

Controlling the release of emissions that result from burning fossil fuels is one of our greatest areas of ongoing concern. Significant CO₂, SO₂, NO_x, mercury and particulate matter reduction are all a focus. In addition to generating efficiency improvements and adding greener sources to our generating mix, SaskPower is investing in the research, development and installation of emissions control technologies.

Our Emissions Control Research Facility (ECRF) at Poplar River Power Station is leading the way. After successfully determining a process to meet SaskPower's need for mercury capture, the ECRF test team is now exploring methods to reduce other emissions. Current work includes evaluation of particulate control enhancement technologies and testing the suitability of processes for controlling emissions of NO_x, not yet demonstrated on flue gases produced by the kind of lignite coal our company burns. SaskPower is also working closely with federal and provincial regulators to ensure that strict guidelines and standards for emissions are not exceeded.

In addition to feasibility studies into low or near-zero emission clean coal and polygeneration projects, SaskPower remains active in a number of additional areas:

Our emissions research partners

SaskPower is playing a leading role in the Canadian Clean Power Coalition (CCPC), for which a SaskPower employee has been seconded as executive director. The group has a mandate to research, develop and demonstrate commercially viable clean coal technology. Members include Canadian coal and coal-fired electricity producers, the California-based Electric Power Research Institute (EPRI), and Basin Electric Power Cooperative from North Dakota. The CCPC is facilitating a demonstration plant program that will lead to the design and construction of a clean coal technology power plant.

In addition, SaskPower is an industry partner in the International Energy Agency (IEA) GHG Weyburn CO₂ Monitoring and Storage Project. This joint research undertaking with the IEA and EnCana is conducting a world-leading international study that involves injecting and storing CO₂ underground for enhanced oil recovery. To date, results demonstrate that the Weyburn field is highly suitable.

SaskPower is also working closely with the University of Regina's International Test Centre (ITC), which develops technologies to reduce CO₂ emissions. The ITC is establishing Saskatchewan as a world leader in CO₂ capture technology, in part through a \$5.2-million pre-commercial scale technology demonstration plant at SaskPower's Boundary Dam Power Station. SaskPower is also a participant in the Canada Centre for Mineral and Energy Technology (CANMET) CO₂ Consortium. Its objective is to advance an Oxyfuel process for the capture of CO₂.

As well, SaskPower is a member of the Lignite Energy Council. This group includes utilities from North Dakota that burn coal similar in make-up to that used in our generating stations. The council supports the development of technologies that are designed to reduce emissions that result from burning coal.

Mercury control

The Canada Wide Standard for mercury requires SaskPower to significantly reduce its mercury emissions by 2010. SaskPower is playing a leading role among Canadian utilities in meeting its mercury limits. Our company has developed in-house capability for analyzing mercury in coal and ash streams, which has been recognized as being one of the most proficient for this kind of analysis. SaskPower is also acknowledged as one of the most experienced utilities anywhere in using continuous mercury analyzers from our work at the ECRF, which has attracted the involvement of other lignite-burning utilities and suppliers of mercury-control technologies, as well as funding support from agencies in Canada and the United States.

In 2007, full-scale injection into the electrostatic precipitator (ESP) on Poplar River Unit #2 was completed. Based on the success of this work, the installation of a permanent mercury control system at both Poplar River units is planned in 2008. Previously, in 2005, the potential for achieving effective mercury control by injecting activated carbon into a fabric filter was demonstrated. In 2006, successful slipstream injection of enhanced activated carbon products into an ESP demonstrated the feasibility of substantially reducing the capital costs associated with mercury control and allowing greater flexibility in dealing with other emissions issues.



777

NUMBER OF OLD THERMOSTATS DIVERTED FROM
LANDFILLS IN 2007 THROUGH OUR COMPANY'S MERCURY
THERMOSTAT RECYCLING PROGRAM.

Other emissions improvements

SaskPower is taking steps to manage other emissions from our generating stations. We continue to improve the efficiencies of ESPs to ensure that the capture of flyash is within design parameters, typically in the order of 96% to 99.5%. In 2006, significant reductions in particulate emissions at Poplar River Power Station Unit #2 were achieved during its major overhaul; in 2007 more particulate collection enhancements were tested and full installation of these is now being considered for 2008. Similar improvements are expected for Unit #1 from work planned during its major overhaul in 2008. Also, installation of flyash conditioning equipment is planned at the ECRF to determine whether the particulate collection efficiency of the ESPs at Poplar River can be further improved.

SaskPower is also conducting a multi-year project involving a series of significant mechanical improvements and upgrades involving SO₂. Once completed, process optimization and potentially more effective SO₂-control reagents will be studied. While the main driver for this work is to reduce our SO₂ emissions so they are well below regulatory limits, we are also examining options to achieve very low SO₂ concentrations in flue gas in order to accommodate effective CO₂ control. Recently proposed Canadian Clean Air Rules will likely require significant SO₂ reductions at numerous coal-fired units. SaskPower is assessing recently available technologies to determine the best way to meet these new limits cost-effectively while positioning us to meet any future CO₂-control requirements.

Our company has an ongoing program to investigate ways of achieving lower NO_x emissions by modifying conditions under which coal is burned. Work is also planned at the ECRF in 2008 to determine the suitability of using technology capable of high NO_x reductions that has yet to be successfully demonstrated on flue gases produced from lignite coal similar to that which SaskPower burns.

In the meantime, initial exploratory tests have been conducted on several recently available processes to remove various contaminants from coal prior to combustion. The success of this work has led to more detailed studies planned for 2008, along with an engineering assessment of the suitability of applying one of these technologies at our coal plants. In addition to removing environmentally harmful coal components, these technologies should also improve plant operations, in contrast to conventional post-combustion controls that generally result in reduced efficiency.

Southeast Saskatchewan Airshed Association (SESAA)

Officially launched in 2007, the SESAA was formed to monitor air quality in southeast Saskatchewan. The intent of the group is to collect scientifically credible regional air quality data and provide information on a real time basis to the public and stakeholders in the region. As a member of the association, SaskPower contributes operational funding and provided an air monitoring station. The SESAA released its 2006 Annual Report in 2007. Results of its passive monitoring showed that SO₂ and NO_x concentrations were well within Saskatchewan annual ambient air quality standards.

FINDING PRODUCTION AND DELIVERY EFFICIENCIES

In 2007, the last phase of the \$130-million rebuild of Unit #2 at the Poplar River Power Station was completed. A newly installed transformer is capable of delivering the additional 10 MW of generation that was gained through the project. Meanwhile, preparation work was completed for a \$140-million major refurbishment of 281-MW Unit #1, which will be completed during a 100-day shutdown in 2008 and is expected to increase the unit's rating by 10 MW.

SaskPower International's 150-megawatt Centennial Wind Power Facility completed its first full calendar year of operations with a 41.4% capacity factor. This rates in the top 10% of wind power facilities in the world and allows us to offset some fossil-fuelled generation with renewable energy. Saskatchewan now has 172 MW of wind capacity — approximately 4% of the province's total generation capacity and currently one of the highest percentages by control area in the country.

Our company is also working to maximize the efficiency of the transmission system to reduce line losses. In the southern part of the province, SaskPower is proposing to build a 230-kV transmission line between the Poplar River Power Station near Coronach and the Pasqua Switching Station near Moose Jaw. The line is expected to provide annual energy savings of 69 gigawatt hours (GWh) per year. During the year, initial routing design was completed and the first open houses held. This 160-km, \$60-million project will result in the longest line being built in Saskatchewan in more than a decade.

Meanwhile, the decision to install gas turbine generators at Ermine in close proximity to increasing oilfield load will reduce the losses on the transmission system by a minimum of 40 GWh per year when compared to the addition of an equivalent amount of generation located at Saskatoon or farther south. As well, our company is evaluating a number of other projects where conversion of the supply

voltage for existing large industrial customers from 72 kV to 138 kV may be feasible. Given the same load level, the line losses at 138 kV are approximately 27% of the line losses at 72 kV. All major new industrial loads will be served at 138 kV, or be capable of future conversion to 138 kV.

ENVIRONMENTALLY PREFERRED POWER (EPP) PROGRAM

SaskPower's EPP Program is designed to provide the opportunity for SaskPower to partner with Independent Power Producers to build and operate small-scale, environmentally low-impact generation projects. In 2007, the NRGreen Kerrobert Heat Recovery Project—a 5-MW project located at Alliance Pipeline's Kerrobert compressor station—operated for its first full year.

This project captures exhaust heat from Alliance Pipeline's natural gas compressor station and uses patented technology to convert the waste heat into electricity, which is then fed into the province's electrical grid. Three other 5-MW waste heat recovery projects being built on Alliance's natural gas pipeline system will be located at Estlin, Alameda and Loreburn. Each is expected to produce enough environmentally responsible electricity to power the equivalent of about 5,000 homes. Through the EPP Program, SaskPower plans to acquire up to 45 MW of environmentally progressive electricity generation capacity. Only wind and heat recovery projects were selected; however, biomass and solar projects also had been submitted.

DISTRIBUTED GENERATION (DG)

SaskPower's DG demonstration program was completed in February 2007. DG is the application of small generators at a consumer's site to produce electricity, which can be used or fed into the electrical grid. Advantages over large centralized power stations include reduced line losses, local fuel resource and waste heat utilization, and GHG emission credits.

SaskPower initiated a DG pilot program several years ago to determine the potential advantages of innovative and sustainable technologies that could provide clear environmental benefits. The program was designed to test various technologies, applications, business models, economic benefits and environmental impacts. Five technologies were chosen: photovoltaic (solar), wood gasification, flare gas, cogeneration and biogas. The most recent areas of activity include:

- **2.8-kW photovoltaic array:** This project at the Saskatchewan Science Centre was installed in 2000. Results show that this technology is better suited for niche applications where connection to the grid is uneconomical or when passive solar enhancement is desired, as the cost savings realized from the solar system cannot effectively offset the capital costs for installation. For the purpose of scientific demonstration, this project will continue to be in operation.
- **120-kW bio-digester power generating skid:** This facility was placed into operation in 2004, converting intensive livestock manure into methane to power four 30-kW microturbines. Results from this pilot are under review; however, the project experienced reliability and economic viability issues. Two immediate problems were identified: the fuel quality did not meet all the requirements of the specification, and the generating equipment often failed. The project was decommissioned in February 2007.
- **600-kW wood gasification power generation unit:** This project was not implemented due to technical difficulties associated with the gasifier; there are no plans to proceed with it further.

All pilots are being evaluated and results will be posted on SaskPower's website in 2008.



99.5

MAXIMUM CAPTURE RATE OF FLYASH AT SASKPOWER'S
GENERATING FACILITIES, IN PER CENT.

VEGETATION MANAGEMENT

Across the province, we manage over 155,000 kilometres of transmission and distribution lines. To ensure the safe operation of these lines, SaskPower maintains vegetation along all power line rights-of-way, which can vary in width from 10 to 70 meters. By using integrated vegetation management practices to promote the development of low-growing vegetation, we reduce the possibility of branches or limbs falling across a line during a storm, which can cause damage and interrupt electrical service. In forested areas, if trees come in contact with high voltage lines, they could cause forest fires.

Integrated vegetation management combines an understanding of plant ecology with a wide range of management tools to manage vegetation in an effective, economical and environmentally responsible manner.

SaskPower's Vegetation Management Policy ensures that vegetation will be managed in a manner that:

- Incorporates ecological principles;
- Considers community values in establishing standards of maintenance;
- Receives land-owner consent;
- Is cost-effective;
- Uses herbicides responsibly; and
- Complies with SaskPower's Environmental Policy, as well as all relevant federal and provincial legislation and municipal bylaws.

The Vegetation Management Policy includes a number of methods for controlling plant species in transmission and distribution line rights-of-way, while also encouraging the establishment of plant species that provide important wildlife habitat. Mechanical methods, the use of seeded and naturally occurring native vegetation, and selective herbicide use are included in the options used by the Corporation.

Because of the lower long-term costs associated with an integrated approach, this policy brings economic as well as environmental benefits. In 2007, SaskPower continued to work cooperatively with rural municipalities and individual landowners to maintain a database of organic growers and other landowners who have chosen not to have herbicides used in power line rights-of-way that are adjacent to their land.

WOOD POLE PROJECT

There are an estimated 1.2 million treated wood poles presently in service in Saskatchewan. An Industrial Treated Wood Users Guidance Document, developed under the leadership of Environment Canada, contains recommendations that are designed to minimize the release of specific chemical preservatives. SaskPower is implementing the guidelines and is working toward full compliance. We are reporting our progress through the CEA.

ELECTRIC AND MAGNETIC FIELDS (EMF)

EMF are invisible forces that surround electrical equipment and wires that carry electricity, including power lines. SaskPower continually monitors research into the possible biological and health effects associated with the fields created by electrical facilities to determine whether EMF are in fact harmful. As a member of the CEA, we closely follow EMF research conducted by universities, government and other scientific bodies. SaskPower also designs and operates electrical generation, transmission and distribution systems to comply with recognized standards, including those issued by the Canadian Standards Association.

SaskPower recognizes that EMF is a complex issue, and it is important to acknowledge and address customer concerns. International health agencies and a large number of independent scientific bodies have been unable to establish from research that there is a health risk from exposure. Scientists and health agencies, however, agree that more research is required to fully resolve the complex technical questions associated with the issue.

Our commitment to the issue of EMF includes the following measures:

- To support employee and public education on EMF;
- Upon request, to provide EMF measurements in and around residential, commercial and public buildings as well as SaskPower facilities, and provide typical EMF readings for common types of electrical equipment;
- To provide estimates of EMF levels for proposed SaskPower electrical facilities;
- To cooperate fully with regulatory agencies established by federal and provincial governments and other electrical utilities to review or consider limits on EMF exposure; and
- To participate in communication forums and regulatory proceedings to remain current on all EMF-related issues.

A ROLE FOR US ALL

THE POWER OF GREEN

SaskPower's GreenPower product provides an opportunity for customers to support EcoLogo-certified low-impact renewable energy in Saskatchewan. This option is available to all customers who are willing to pay a little more for environmentally friendly electricity.

GreenPower was introduced to Saskatchewan in 2002 and is supplied by the 17-turbine 11-MW Sunbridge Wind Power Project and the 16-turbine 11-MW Cypress Wind Power Facility. GreenPower is distributed throughout Saskatchewan to over 1,100 residential, business and farm customers. Large customers include the Governments of Canada and Saskatchewan, SaskTel, University of Regina, and Hitachi Canada. SaskPower also purchases GreenPower to operate its offices.

REINFORCING THE IMPORTANCE OF RECYCLING

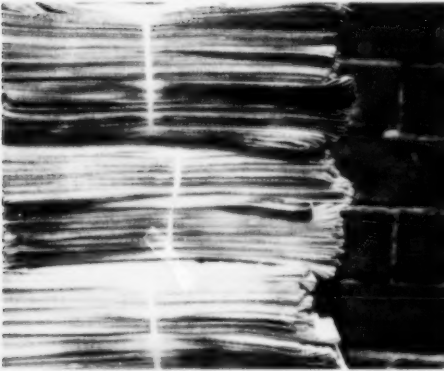
Our Zero G Waste Management and Resource Recovery Program is helping raise awareness among SaskPower employees and customers about our goal of zero garbage. Internally, Zero G is in place at SaskPower offices and facilities across the province. One of the main components of the program is a corporate paper and cardboard recycling program. During 2007, SaskPower recycled 78,636 kilograms of waste paper and cardboard from facilities in southern Saskatchewan.

In addition to paper products, SaskPower has found that many of the items used in operations were not included in existing recycling programs. As a result, whenever possible, we are responding by developing new recycling programs, either on our own or in partnership with other organizations. Today, Zero G includes recycling programs for materials as diverse as aerosol cans, oily rags, used oil, solvents, antifreeze, batteries, printer cartridges, phone books, plastic bags, metals and streetlight bulbs. Waste audits — another key element of the program — are conducted at SaskPower facilities

each year to help identify new resource recovery opportunities and to ensure that effective waste diversion methods are in place. A pilot project was initiated in 2007 that will see fluorescent light tubes collected for recycling.

SaskPower is also taking Zero G to the community and raising awareness about the importance of waste reduction through a number of initiatives:

- **Clean Team:** This program is a unique partnership between SaskPower and the Saskatchewan Association of Agricultural Societies and Exhibitions (SAASE). It helps local community groups across Saskatchewan address waste management and disposal on fair grounds. Additional benefits include waste reduction at local landfills, revenues for local non-profit groups through honoraria and recycling proceeds, as well as year-round access to SaskPower recycle and refuse bins at exhibition facilities. In 2007, 27,675 bags of trash were collected and 3,420 bags of recyclables were diverted from landfills.
- **Saskatchewan Waste Reduction Council:** SaskPower supplies financial support to this organization. The council delivers public education initiatives, particularly during Waste Reduction Week each fall.
- **think FOOD:** Our company continues to join the Regina and District Food Bank in the think FOOD program, which recycles laser and inkjet cartridges from SaskPower's offices as part of a Canada-wide initiative. The program also raises much-needed funds for Saskatchewan food banks.
- **Head office waste audit:** Grade five students from St. Catherine School in Regina assisted with an annual waste audit at SaskPower's Head Office in June of 2007, giving participating youth first-hand knowledge of the environmental benefits of recycling and waste diversion.



78,636

KILOGRAMS OF WASTE PAPER AND CARDBOARD
RECYCLED FROM SASKPOWER FACILITIES IN SOUTHERN
SASKATCHEWAN DURING THE YEAR.

A COMMITMENT TO COMMUNITY

Our company recognizes the importance of achieving mutual environmental goals through active involvement with groups and sponsorship of activities. Our joint work involves projects ranging from habitat protection to sustainability education.

- **Destination Conservation Saskatchewan (DCS) Program:** SaskPower and SaskEnergy are key sponsors of this initiative. Delivered in schools across the province by the Saskatchewan Environmental Society, DCS is student-driven and activity-based, with an emphasis on environmental awareness and energy conservation. It promotes sustainability by helping schools conserve resources and is an integral part of SaskPower's EPC Program for Saskatchewan school divisions.
- **Nature Saskatchewan:** This group's PlantWatch Program enables citizen scientists throughout Saskatchewan to track bloom times of common native plants. This data is used to help create awareness about climate change, GHGs and simple lifestyle changes that can make a difference to our environment. SaskPower also funds Stewards of Saskatchewan, which is an umbrella for three landowner stewardship programs — Operation Burrowing Owl, Shrubs for Shrikes, and Rare Plant Rescue.
- **Partners for the Saskatchewan River Basin:** We partner with this organization to present Saskatchewan Envirothon, which features teams of high school students demonstrating their knowledge of environmental science, natural resource management, and ecology. The two-day competition tests skills in aquatics, forestry, renewable energy, soils, and wildlife management through written exams, field tests, and oral presentations.
- **Native Plant Society (NPS):** As a partner of NPS, SaskPower is committing \$15,000 per year over a five-year period in support of the Regina Plain Native Plant Nursery, which provides all the seed for the Regina Plain Native Prairie Restoration Project. The nearly 900,000-hectare Regina plain, which includes the cities of Regina, Moose Jaw and Weyburn, is the target area for this initiative. The official unveiling of interpretive signage at the restoration site near the University of Regina took place in 2007. The area was seeded with 80 native prairie species, such as Canada wildrye, rough fescue, green needle grass, cone flowers and gaillardia.
- **Saskatchewan Prairie Conservation Action Plan (PCAP):** This organization represents multiple stakeholders interested in promoting and conserving Saskatchewan's native prairie.

In early 2007, SaskPower was the sponsor of the 8th Annual Prairie Conservation and Endangered Species Conference organized by PCAP and held in Regina. SaskPower also began working with PCAP partners to renew and revitalize the next five-year plan, which is up for renewal in June of 2008.

- **Saskatchewan River Sturgeon Management Board (SRSMB):** SaskPower was one of the founding members of the SRSMB and continues as an active member. The mandate of the group is to prevent the further decline of lake sturgeon in the Saskatchewan River downstream of E.B. Campbell Hydroelectric Station. In 2007, SaskPower provided funding to the sturgeon index fishing program, coordinated through the Saskatchewan Ministry of Environment and conducted by local fishermen. Our company's contributions also funded communication initiatives, including the development of a website (saskriversturgeon.ca).
- **Saskatchewan Wildlife Federation (SWF):** SaskPower is a sponsor of SWF's Youth Outdoor Leadership and Conservation School at the Prince Albert Wildlife Federation, which has been operating since 1970. Since its inception, over 1,000 girls and boys aged 14 to 17 have attended the school. Its purpose is to encourage youth to learn about and appreciate natural surroundings in Saskatchewan. Qualified instructors teach youth about wilderness survival, canoeing, camping, fishing, game and fisheries management, orienteering, and the traditional and medicinal use of plants.
- **Ducks Unlimited Canada (DUC):** Each year SaskPower contributes approximately \$115,000 to DUC to undertake initiatives designed to support the conservation of ducks, migratory birds and their habitats. In 2007, the sponsorship was directed to four programs:

Habitat Securement - Conservation Easement Program

The protection of existing upland and wetland habitats is identified as a high priority. Conservation easements protect lands that are located in areas where habitat loss is occurring, primarily targeting native uplands and associated wetlands that are located in areas of good waterfowl reproduction. This program is a voluntary legal agreement between a landowner and DUC. It is intended to preserve the natural integrity of the land by limiting the amount and type of development that can occur on the property. In 2007, 190 hectares in the Allan/Dana Hills area and 160 hectares in the Upper Assiniboine were secured with the assistance of SaskPower funds.

Saskatchewan Wetland Education Program

SaskPower's sponsorship of the program has assisted in the development of wetland and field resource materials for teachers and the production of interpretive material for existing DUC projects. Education contractors working in and around North Battleford, Melfort, Saskatoon, Regina, Yorkton, Swift Current and Wadena deliver hands-on opportunities for students to learn about Saskatchewan wetlands. Since the program began in 1999, it has provided learning opportunities to over 53,200 children and 5,730 adults. In 2007, field trips and class presentations for Saskatchewan's Project Webfoot exceeded program goals, reaching 8,774 students and 890 adults (teachers, teaching assistants and parents).

Habitat Restoration Program - Lightning Creek Forage Conversion

The Lightning Creek area is located in the southeastern area of Saskatchewan near Estevan. In 2007, DUC targeted this area with a forage program allowing producers to access funding to assist in the conversion of cultivated areas into hay or pasture land. New habitats were created and existing habitats preserved with the seeding of 700 hectares with forage.

Provincial Wetland Restoration Program

Although there are currently regulations in place to allow for wetland drainage, there are areas where the majority of drainage works are unauthorized. Restoring wetlands, especially where illegal drainage has occurred, has many benefits including: runoff control, improved water quality, and increased biodiversity. In 2007, SaskPower's contribution resulted in the restoration of 34 wetlands of the 294 restored by DUC in the past year.

- **Zebra Mussels:** Originating in Europe, Zebra mussels are an invasive species that can damage ecosystems and water intake structures. In 2007, SaskPower continued its public education program and undertook monitoring at company facilities identified as having a higher risk of zebra mussel introduction.

SASKPOWER SHAND GREENHOUSE

Since 1991, SaskPower Shand Greenhouse has been using waste heat from the nearby Shand Power Station to grow a total of over 5.7 million tree, shrub and grass seedlings. These have been provided to the community for use in land reclamation and other environmental planting projects. A highlight for this year was the provision of a small batch of approximately 125 native plant seedlings to Grasslands National Park in order to experiment with the reintroduction of these plants into reclaimed agricultural lands.

Educational activities are of equal importance. Efforts to educate energy consumers about the impacts of their choices are anchored by the Energy and Environment Program. It features a poster contest, classroom presentations, environmental workbooks, and an e-Clips video contest for high school students. These initiatives, combined with regular and school tours, reached approximately 2,700 students during the year.

In 2007, SaskPower Shand Greenhouse also joined forces with the Department of Soil Sciences at the University of Saskatchewan and other partners to explore the potential for growing biomass as an alternative energy source. The greenhouse is hosting one of four trial locations located throughout the province that are determining survival and growth characteristics and carbon sequestration potential of 30 willow clones.



8,774

NUMBER OF STUDENTS REACHED DURING 2007
THROUGH SASKPOWER-FUNDED WETLAND
EDUCATION PROGRAMMING.

REPORTING

**COMMUNICATING
IN AN OPEN AND
TRANSPARENT
FASHION WITH OUR
STAKEHOLDERS,
SHAREHOLDER
AND CUSTOMERS
IS CRITICAL AS WE
STRIVE TO MAINTAIN
RELATIONSHIPS
CHARACTERIZED
BY TRUST.**

**SASKPOWER REPORTS ON ENVIRONMENTAL ACTIVITIES IN SUCH A WAY
THAT OUR EFFORTS CAN BE JUDGED AGAINST PAST PERFORMANCE
AND ALSO COMPARED ON AN EQUAL FOOTING WITH EFFORTS BY
CORPORATIONS IN OTHER JURISDICTIONS.**

At SaskPower, our environmental tracking and reporting is varied:

- We report annually to our customers, shareholder and stakeholders through this Environment Report.
- We file an annual Environmental Commitment and Responsibility Program (ECRP) report with the Canadian Electricity Association (CEA).
- We report annual greenhouse gas (GHG) emissions and corporate environmental expenditures to Statistics Canada.
- We report annually to Environment Canada's National Pollutant Release Inventory (NPRI), as well as provide information on air pollutants, GHGs and other substances under the Section 71 Notice of the *Environmental Protection Act, 1999*.

GENERATION AND TRANSMISSION SYSTEM

NET GENERATION (GWh)

	2007	2006	2005	2004	2003
Fossil ^a	13,680	13,217	13,263	14,370	14,044
Hydro	4,393	4,032	4,573	2,766	3,416
Wind ^b	580	535	56	35	20
Total	18,653	17,784	17,892	17,171	17,480

^a Coal, gas, diesel and Gory Cogen/steam Station

^b Cypress Wind Power Facility and Centennial Wind Power Facility

TRANSMISSION AND DISTRIBUTION LOSS (TWh) (2003-2007)

	2007	2006	2005	2004	2003
Transmission (72 kV - 230 kV)	12,216	12,212	12,159	12,149	12,104
Distribution (14.4 kV - 25 kV)	143,602	142,843	142,110	141,408	140,733

NET COAL AND GAS GENERATION (TWh)



INTERNAL ENERGY EFFICIENCY

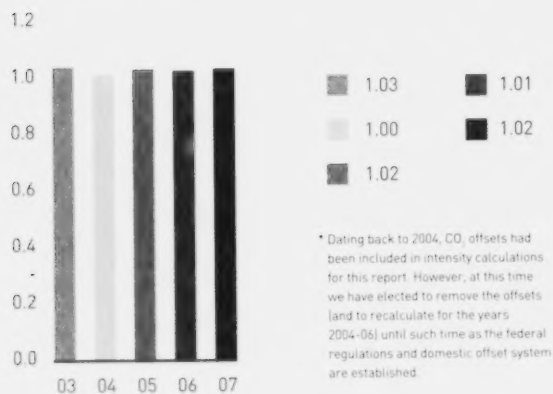
Three internal energy indicators measure the efficiency of the three major phases of electricity delivery — generation, transmission and distribution. This essentially constitutes the amount of electricity used and/or lost in each of the phases. The energy conversion percentage for 2007 is consistent with past performance and is within historical normal variables.

INTERNAL ENERGY EFFICIENCY [%]

	2007	2006	2005	2004	2003
Generation	94.6	94.7	94.5	94.1	94.6
Transmission	94.4	95.4	95.8	95.5	95.8
Distribution	93.8	95.0	95.4	95.0	95.3

EMISSIONS

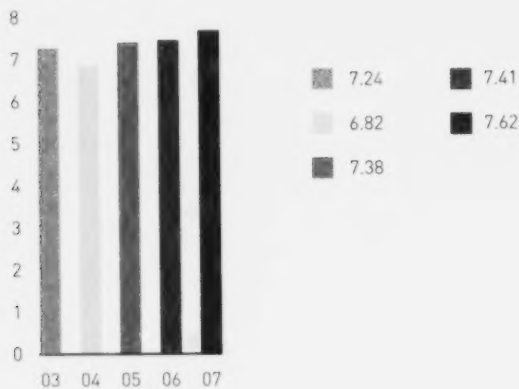
MASS NET CO₂ EMITTED PER UNIT OF NET FOSSIL GENERATION [kg/kWh]



MASS NET NO_x EMITTED PER UNIT OF NET FOSSIL GENERATION [g/kWh]



MASS NET SO₂ EMITTED PER UNIT OF NET FOSSIL GENERATION [g/kWh]



OFFSETS

In the past few years, SaskPower has included CO₂ offsets, available through our offset agreements and initiatives, in our intensity calculations submitted to the CEA's ECRP and published in this report. At this time, however, until the rules for the Federal Government clean air regulations are clarified and the domestic offset system is functional, we will not be including these offsets. We will pursue using these credits for meeting the planned federal emission regulations once the regulations and offset system are established.

In addition to GHGs, SaskPower is also developing ways to offset other emissions. We are working with IPSCO and Wheat City Metals in Regina on a program through which the mercury in automotive switches is captured and recycled before cars are crushed. And in 2007, in the second year of our Mercury Thermostat Recycling Program that ensures the safe collection and recycling of mercury from old household thermostats, 777 thermostats were collected. Both the household thermostat and automotive switch programs will help our coal-fired stations meet new federal mercury emissions regulations. Through these programs over 48 kilograms of mercury were collected in 2007.

SCREENINGS, ASSESSMENTS AND PROJECT APPROVALS

As part of our Environmental Management System (EMS), and to ensure compliance with all legislative requirements, SaskPower continually conducts internal screening of generation, transmission and distribution projects. If there is any probability that environmentally sensitive lands, habitats, species or archaeological sites may be affected by development, project plans are referred to Environmental Programs for a detailed review. This review may determine if legal approvals and permits are required, a field assessment may be required, an environmental protection plan must be implemented, or whether other actions are necessary. In 2007, 619 projects were referred to Environmental Programs.

PROJECT REFERRALS AND FIELD ASSESSMENTS

	Referrals					Field assessments				
	2007	2006	2005	2004	2003	2007	2006	2005	2004	2003
Generation	4	1	0	2	3	3*	2*	2*	4*	2
Transmission	22	16	9	2	8	7*	5*	3*	8*	10
Distribution	567	465	526	383	326	71*	70*	62*	38*	37*
Fibre optic	2	4	-	-	-	1	5	-	-	-
Other	24	8	11	5	0	2	0	7	3	0
Total	619	494	546	392	337	84*	82*	74*	53*	49*

* Includes fieldwork conducted in 2007 for projects referred to Environmental Programs in previous years

MAJOR PROJECT SCREENING

In 2007, Environmental Programs participated in the following major projects:

- **150-MW Centennial Wind Power Facility:** As a condition of federal environmental approval of the Centennial Wind Power Project, a mortality study of bird and bat impacts was required. The study began early in 2006 and concluded in fall of 2007. The report is expected to be released in 2008.
- **Poplar River to Pasqua 230-kV Transmission Line:** In early 2007, SaskPower began the process of planning the construction of a new 230-kV electrical transmission line from the Poplar River Power Station near Coronach to the Pasqua Switching Station near Moose Jaw. The purpose of this project is to deliver additional electrical power from Poplar River Power Station to customers, to enhance reliability of service to the Moose Jaw area, to meet new North American Electric Reliability Corporation (NERC) standards, and to improve efficiency by reducing line loss. Due to the scope of the project, SaskPower and the Saskatchewan Ministry of Environment concluded that this project constituted a development as defined in the *Environmental Assessment Act* and that an Environmental Impact Assessment (EIA) pursuant to that provincial *Act* was required.

Throughout the year, SaskPower worked with consultants on different activities to initiate the environmental assessment program that will ultimately contribute to the EIA to be submitted to the Saskatchewan Ministry of Environment at the end of 2008 for ministerial approval. In the first step of this program, environmental information was gathered and analyzed to assist in presenting environmental aspects for the three corridor options presented at public open houses in June. The environmental information gathered and any information obtained from the public contributed to the process of selecting a preferred corridor for the line. More exhaustive environmental and archaeological investigations will take place in 2008.

- **New line connections and voltage upgrades to Saskatchewan industries:** In 2007, Saskatchewan's heightened economic activity had an impact on the number of requests for new connections and service upgrades from industries of all sectors. Consequently, numerous new transmission lines of 72 kV or 138 kV were brought forward for environmental assessment and approvals. This trend is expected to continue into 2008 and beyond.

SITE ASSESSMENTS

SaskPower conducts site assessments prior to the sale, purchase or lease of property, or as a result of identification of potential contamination. The assessments may include the investigation of impacts to soil and ground water for polychlorinated biphenyls, hydrocarbons, metals, soil sterilants, and wood treatment chemicals. If necessary, we initiate site remediation after the assessment has been completed. Treatment and disposal of impacted soils are carried out on SaskPower property, or at local community landfills, registered industrial landfills, or other regulator-approved locations.

An environmental site assessment includes three phases:

- **Phase I Environmental Site Assessment (ESA):** The process used for the identification of past, present or potential environmental concerns through records review, site visits, interviews, etc. This determines if an assessment (Phase II ESA) is needed.
- **Phase II ESA:** The process used to characterize and/or delineate the concentrations or quantities of substances of concern related to a site and to compare those levels to criteria.
- **Remediation:** The process used to remove the impacted contaminant from a site for disposal or treatment.

SITE ASSESSMENTS

	2007			2006		
	Phase I	Phase II	Remediation	Phase I	Phase II	Remediation
Substations	10	15	3	4	7	2
Switching stations	-	-	1	2	3	1
Former power plants	-	4	-	-	3	-
District offices	8	10	2	6	3	-
Pole yards	1	1	-	-	-	-
Vacant land/other	-	-	-	3	3	-
Treatment sites	-	2	-	-	2	-
Mine development	8	-	-	14	-	-
Total	27	32	6	29	21	3

SPILLS

Current legislation requires that spills of hazardous substances be reported to regulatory authorities. Legislation defines a spill by type, volume and location. SaskPower had 11 reportable spills in 2007. The impact of these spills was either negligible or mitigated as appropriate.

NUMBER OF REPORTABLE SPILLS

	2007	2006	2005	2004	2003
Oil spills	9	12	7	6	5
PCB-contaminated oil spills (>5 ppm)	1	2	2	6	5
Other spills	1	0	6	5	4
Total spills	11	14	15	17	14

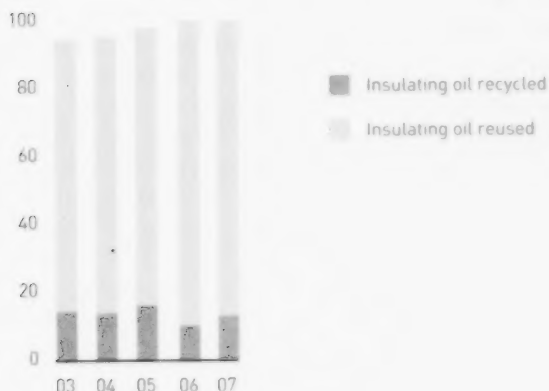
PCB MANAGEMENT

PCBs were used by the electrical utility sector as cooling and insulating fluids in some types of electrical equipment. Today, they remain present as a contaminant in varying concentrations in some of SaskPower's equipment. Due to adverse effects if released into the environment, SaskPower uses special handling, storage and disposal measures when dealing with PCB-contaminated equipment.

INSULATING OIL

Mineral oil is used as an insulator and coolant in virtually all of SaskPower's transformers and in many other types of electrical equipment. Our company reuses most of the oil, and the remainder is recycled.

INSULATING OIL REUSED AND RECYCLED (%)

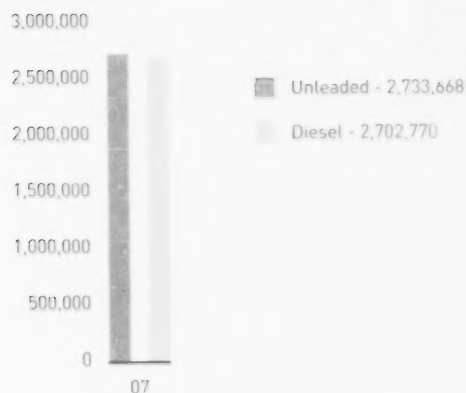


TRANSPORTATION MANAGEMENT

Our Fleet Services area is researching environmental advances in fleet-related technologies and management methodologies. In 2004, SaskPower added three hybrid trucks to our fleet for testing over a three-year period. The project gathered data on the effectiveness of hybrids in a variety of Saskatchewan work settings, including city and highway uses. The lease terminated in May 2007, data will be analyzed to evaluate the effectiveness of this technology compared to conventional applications in SaskPower's fleet.

Fleet Services continually monitors the performance of our entire gasoline and diesel fleet, with a focus on our light-duty vehicles. To date, current trends and experience indicate that our diesel and gasoline units have similar fuel economies when averaged over applications, ages of assets and engine displacements. While diesel units have had a marginally smaller fuel cost per litre than gasoline units, their repair costs are trending upwards as these assets age (based on current performance).

2007 VEHICLE FLEET FUEL CONSUMPTION (LITRES)



CANADIAN ELECTRICITY ASSOCIATION'S (CEA) ENVIRONMENTAL COMMITMENT AND RESPONSIBILITY PROGRAM (ECRP)

SaskPower is a founding member of the CEA's ECRP, which was established in 1997 to demonstrate the electricity industry's commitment to improving environmental performance. Participation in the ECRP is mandatory for SaskPower's membership in CEA.

The ECRP report provides a summary of the significant work being done throughout our industry to address environmental challenges. The report includes details on initiatives undertaken by member organizations as well as annual combined utility indicator data. The CEA's ECRP reports can be found online at canelect.ca/en/aboutcea/aboutcea_documents_annual.html.

The following chart shows SaskPower's data for ECRP indicators compared to combined data of CEA member utilities. The combined ECRP data for 2007 was not available at the time of printing.

	2007	2006		2005		2004		2003	
	SaskPower	SaskPower	CEA	SaskPower	CEA	SaskPower	CEA	SaskPower	CEA
Mass net carbon dioxide per unit of net fossil generation (kg/kWh) ^{A, B}	1.02	1.01	0.84	1.02	0.91	1.00	0.93	1.03	0.95
Mass net sulphur dioxide per unit of net fossil generation (g/kWh) ^A	7.62	7.41	4.07	7.39	4.39	6.82	4.96	7.24	4.91
Mass net nitrogen oxides emitted per unit of net fossil generation (g/kWh) ^A	2.71	2.51	1.56	2.58	1.64	2.57	1.77	2.50	1.84
Mass net mercury emitted per unit of net fossil generation (kg/TWh)	45.11	42.41	15.42	-	-	-	-	-	-
Reportable spills ^C	11	14	463	15	526	23	597	14	1,100
Priority spills ^{C, D}	4	2	100	0	76	2	83	1	70
PCB in storage (tonnes) ^{C, E}									
High level	0	0	26.5	0	45.6	0	27.5	1	44
Low level	2	5	237.8	1	442.5	1	374.6	13	806
PCB sent for destruction (tonnes) ^C									
High and low level	13	8	972.2	9	1373.5	30	1,079.5	42	1,678.6

^A Includes 100% from Cory Cogeneration Station in 2007.

^B SaskPower's data from 2004-06 has been recalculated to no longer include CO₂ offsets. Until federal regulations are clarified and the domestic offset system established, offsets will not be included in intensity calculations.

^C The data reported through the ECRP for reportable and priority spills, as well as PCBs in storage and sent for destruction, are representative of the overall totals of all Canadian utilities (including SaskPower) that have been participating in this industry-wide program. ECRP criteria for reportable spills differ from the definition of reportable spills included in provincial legislation. Data meeting provincial criteria is found on page 21.

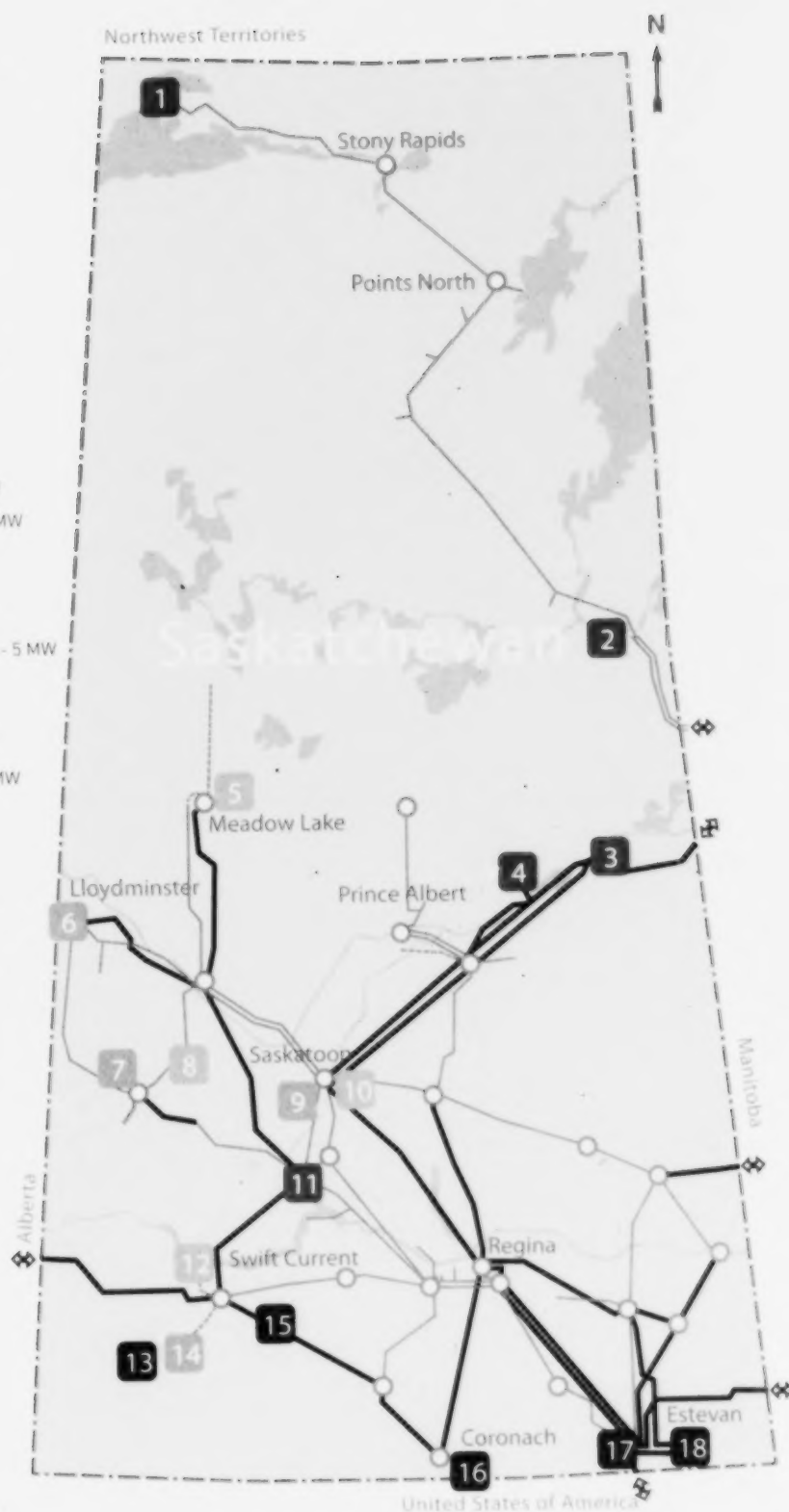
^D In compliance with the CEA's ECRP reporting guidelines, a priority spill is one involving a substance that is a petroleum product or PCB-contaminated, and either one of the following: a spill with a volume greater than 500 litres or a spilled substance that enters a water body.

^E According to the ECRP guidelines, high level PCB material is defined as any material (including equipment) with a PCB concentration greater than 1% (10,000 ppm), low level PCB material is defined as any material (including equipment) with a PCB concentration of greater than 50 ppm but less than 10,000 ppm.

- ☒ Hydroelectric
- ☐ Natural gas
- ☐ Wind
- ☐ Coal
- ☐ Independent Power Producer

- TRANSMISSION

- 230 kV
 138 kV
 138 kV line operating at 72 kV
 Switching station
 Interconnection



GLOSSARY

Biogas

Methane created from the decomposition of organic matter such as manure or landfill waste, can be used to power engines to generate heat and electricity.

Biomass

Energy resources derived from organic matter. These include wood, agricultural waste and other living-cell material that can be burned to produce heat energy.

Capacity

In the electric power industry, capacity has two meanings. System capacity is the maximum power capability of a system. Equipment capacity is the maximum power capability of a piece of equipment.

Capacity factor

The ratio of the electrical energy produced by a generating unit for the period of time considered to the electrical energy that could have been produced at continuous full power operation during the same period.

Cogeneration

Simultaneous production of heat energy and electrical power from the same fuel in the same facility. The use of waste heat (as in steam) from an industrial process to produce electricity or the use of steam or hot water from electric power generation as a heating source.

Distribution

Process of moving electric energy at lower voltages from major substations to customers.

EcoLogo

Launched by the Canadian Federal Government, EcoLogo is North America's oldest environment standard and certification organization.

Electric fields

Invisible fields of force created by electric voltage, measured in volts/metre (V/m).

Electrostatic precipitator (ESP)

A device for removing particles of ash, dust, smoke and other elements from air and gas flows.

Environmental Management System (EMS)

Part of an overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing and implementing an environmental policy and managing environmental aspects.

Flyash

Fine powder resulting from the combustion of pulverized coal used in many coal-fired generating stations.

Fossil-based generation

Includes coal- and natural gas-fired generation of electricity.

Gigawatt hour (GWh)

A unit of bulk energy; 1,000,000 kilowatt hours.

GreenPower

An EcoLogo-certified product offered by SaskPower that provides customers with the opportunity to purchase blocks of electricity produced from renewable resources.

Greenhouse gas (GHG)

Naturally occurring gases such as carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) that trap heat in the earth's lower atmosphere.

ISO 14001

A standard that defines the elements of a sound environmental management system. The ISO 14000 Series is a family of environmental management standards developed by the International Organization for Standardization (ISO).

Kilovolt (kV)

A unit of pressure, or push, of an electric current; 1,000 volts.

Kilowatt hour (kWh)

A unit of bulk energy; 1,000 watt hours. The measurement is generally used for billing residential customers.

Lignite

A low-grade coal, intermediate between peat and bituminous, lignite has the lowest energy content among the various grades.

Magnetic fields

Invisible fields of force created by electric current, measured in microtesla (μT) or milligauss (mG); $1 \mu T = 10 \text{ mG}$.

Megawatt (MW)

A unit of bulk power; 1,000 kilowatts. The output of a commercial generator or power station is usually expressed in megawatts.

Net metering

The offsetting of electrical consumption by a customer against the same customer's production of electricity, typically from a small scale renewable energy source such as wind or solar.

Offsets

Initiatives designed to reduce net emissions from the burning of fossil fuels. Offsets are carried out independently of the source emissions.

Oxyfuel process

Combustion in the presence of oxygen, which results in a flue gas containing almost exclusively water and carbon dioxide.

Particulate matter

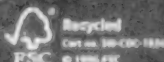
Emissions of ash particles from the burning of fossil fuels.

Polychlorinated biphenyls (PCBs)

A group of organic compounds that were once used as cooling and insulating fluids in various types of electrical equipment, including transformers and capacitors.

Transmission

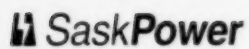
Process of moving electric power in bulk at higher voltages from the source of supply to distribution centres.



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SaskPower Environmental Programs
6SE - 2025 Victoria Avenue
Regina, Saskatchewan
S4P 0S1 Canada

1-800-667-4749 in Saskatchewan
or 566-2853 in Regina

environmental_programs@saskpower.com